### SCOTTSDALE POLICE DEPARTMENT CRIME LABORATORY BLOOD ALCOHOL FACE SHEET

ANALYSIS DATE 05/08/2019 SEQUENCE NAME 08May19 EQUIPMENT Hamilton ML600EH7497 Hamilton ML600GJ10749 Pipettor X Agilent US14173023 Gas Chromatograph INSTRUMENT CALIBRATION Vial 1 0.02 calibrator Lot FN03241604 Coefficient of determination (r<sup>2</sup>) Vial 2 0.10 calibrator Lot EN06181501 0.99999 Vial 3 0.20 calibrator CLot EN07201502 Vial 4 0.40 calibrator Lot FN11191402

### CALIBRATION VERIFICATION AND RESOLUTION TEST

10

Vial	Sample C	Expected result	Measured result	Manufacturer/lot
5	Blank	Not detected	Not detected	SPD lab 121118
6	Volatiles mixture	6 compounds	6 compounds	SPD lab 020917WLA
7	Aqueous control	0.400 g/dL	0.404 g/dL	Lipomed 08012015-C
8	Aqueous control	0.040 g/dL	0.039 g/dL	Lipomed 09022015-A
9	Blood control	0.198 g/dL	0.204 g/dL	ACQ 407041529/13
20	Aqueous control	0.080 g/dL	0.079 g/dL	Lipomed 28082014-B
31	Aqueous control	0.400 g/dL	0.407 g/dL	Lipomed 08012015-C
32	Aqueous control	0.040 g/dL	0.040 g/dL	Lipomed 09022015-A
32 33	Blood control	0.198 g/dL	0.200 g/dL	ACQ 407041529/13
34	Blank	Not detected	Not detected	SPD lab 121118

### SUBJECT SAMPLES

Subjects in the sequence \_\_\_\_

Subjects requiring reanalysis

0

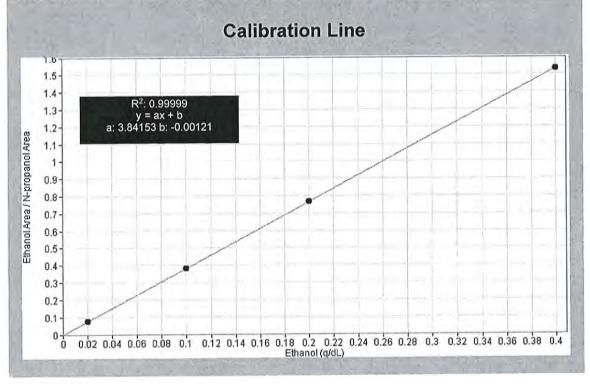
ADDITIONAL NOTES: All QA data met. Hand corrected name on chromatograms 10/11 and 21/22 as well as worklist and sequence. This run also included four proficiency samples at positions 23-30.

Run valid X Run valid V WA BISTO 5/20/19 Run invalid Run invalid Analyst Technical Reviewer

# Scottsdale Police Department Crime Laboratory Sequence Quality Assurance Summary

Sample Name	Vial	Measured Value (g/dL)	Expected Value (g/dL)	Percent Difference	O Absolute Difference (g/dL)
blank 121118	5	negative	negative	o alle	EV -
0.400 08012015-C	7	0.404	0.400	C 1.00	0.004
0.040 09022015-A	8	0.039	0.040	2.50	-0.001
0.198 407041529/13	9	0.204	0.198	3.03	0.006
0.080 28082014-B	20	0.079	0.080	1.25	-0.001
0.40 08012015-C	31	0.4075	00.400	1.75	0.007
0.04 09022015-A	- 32	0.040	0.040	0.00	0.000
0.198 407041529/13	33	0.200	0.198	1.01	0.002
olank 121118	34	negative	negative		

Calibrator	Ethanol Area	N-propanol Area	Ratio
0.020	12.057	161.005	0.075
0,100	62.509	163.489	0.382
0.200	123.356	160.333	0.769
0.400	246.304	160.517	1.534

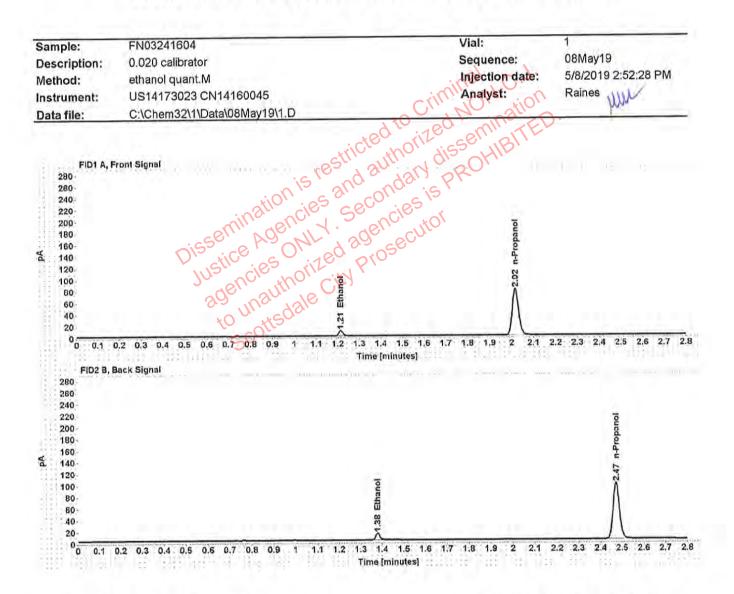


# Sequence Summary

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Page 1 of 1

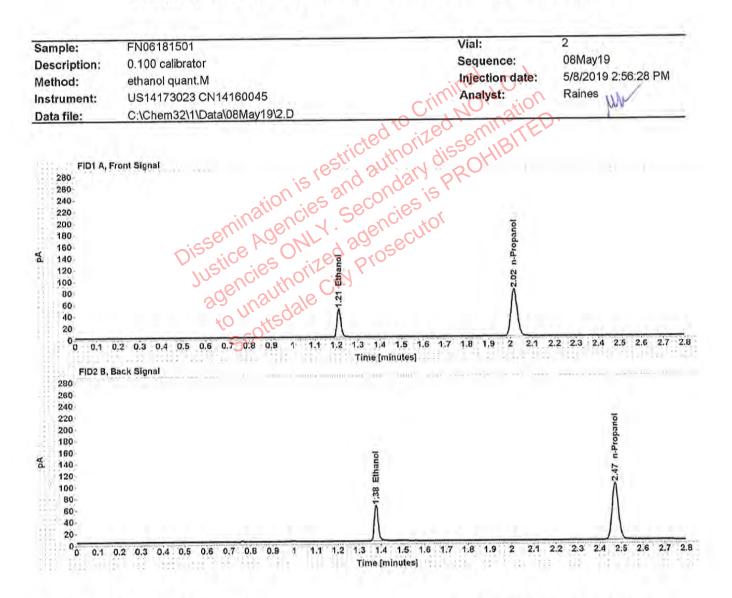
equer	nce name: 08	May19 Instrument: US14	173023 CN1416004	5 Anal	yst: Raines 🔰
Vial	Sample	Description	Type	LIMSID	Method
1	FN03241604	0.020 calibrator	Calibration	J. ation	ethanol quant.N
2	FN06181501	0.100 calibrator	Calibration	MILTER	ethanol quant.N
3	FN07201502	0.200 calibrator	Calibration	BI	ethanol quant.M
4	FN11191402	0.400 calibrator	Calibration	)HII	ethanol quant.M
5	121118	Negatives	Control		ethanol quant.M
6	020917	Volatiles mix	Control		ethanol quant.M
7	08012015-C	0.400	Control		ethanol quant.
8	09022015-A	0.040	Control		ethanol quant.M
9	407041529/13	155 0 108 29	Control		ethanol quant.f
10		diction of the pr	Sample		ethanol quant.f
11			Sample		ethanol quant.
12			Sample		ethanol quant.
13			Sample		ethanol quant.
14	-		Sample		ethanol quant.
15			Sample		ethanol quant.
16			Sample		ethanol quant.
17			Sample		ethanol quant.
18			Sample		ethanol quant.
19	-		Sample		ethanol quant.
20	28082014-B	0.080	Control		ethanol quant.
21			Sample		ethanol quant.
22	1		Sample		ethanol quant.
23			Sample		ethanol quant.
24			Sample		ethanol quant.
25			Sample		ethanol quant.
26	1		Sample		ethanol quant.
27			Sample		ethanol quant.
28	1		Sample		ethanol quant.
29			Sample		ethanol quant.
30			Sample		ethanol quant.
31	08012015-C	0.400	Control		ethanol quant.
32	09022015-A	0.040	Control	· · · · · · · · · · · · · · · · · · ·	ethanol quant.
33	407041529/13	0.198	Control		ethanol quant.
34	121118	Negative	Control		ethanol quant.



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Time (min)	Peak Area
Ethanol	1.213	12.057
n-Propanol	2.017	161.005

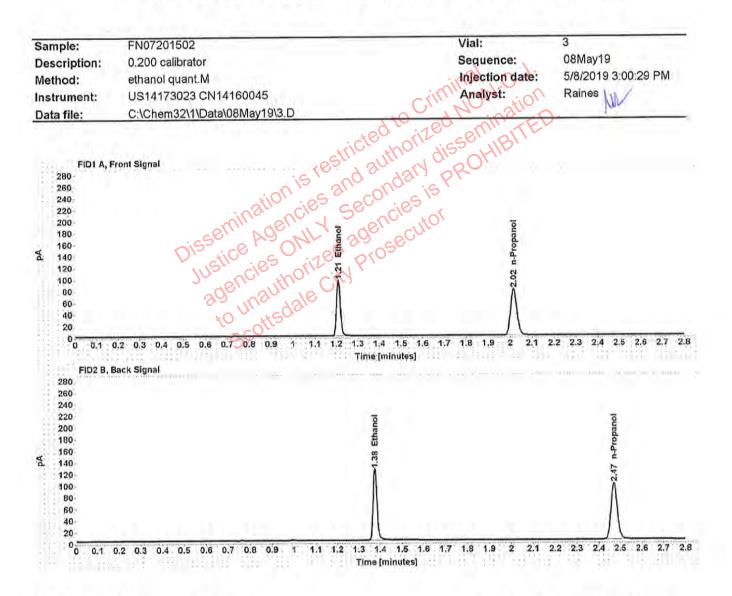
Compound	Time (min)	Peak Area
Ethanol	1.379	14.934
n-Propanol	2.472	197.761



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Time (min)	Peak Area
Ethanol	1.211	62.509
n-Propanol	2.017	163.489

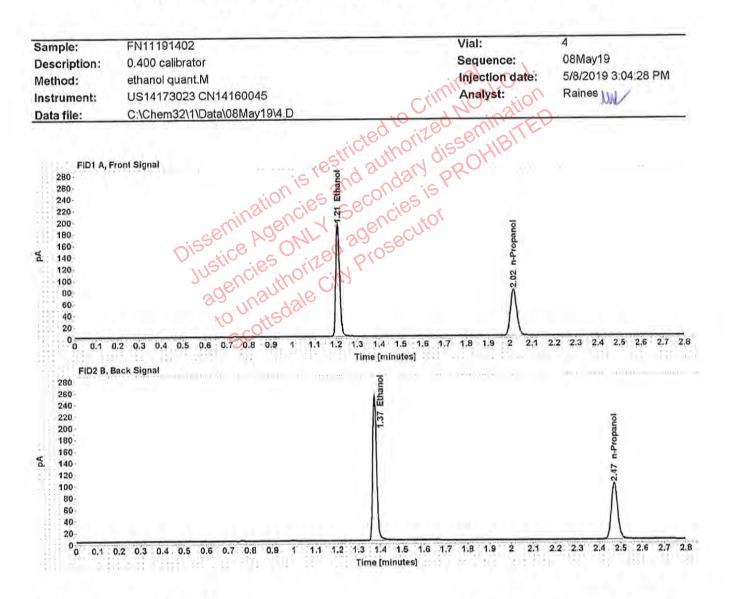
Compound	Time (min)	Peak Area
Ethanol	1.377	77.352
n-Propanol	2.472	200.885



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Time (min)	Peak Area
Ethanol	1.209	123.356
n-Propanol	2.016	160.333

Compound	Time (min)	Peak Area
Ethanol	1.375	153.590
n-Propanol	2.471	197.444



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Time (min)	Peak Area
Ethanol	1.209	246,304
n-Propanol	2.016	160.517

Compound	Time (min)	Peak Area
Ethanol	1.375	307.402
n-Propanol	2.470	197.657

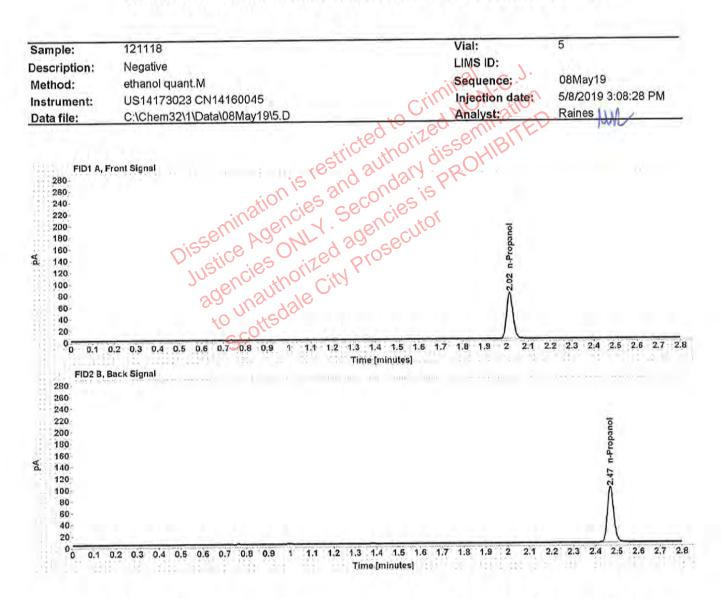
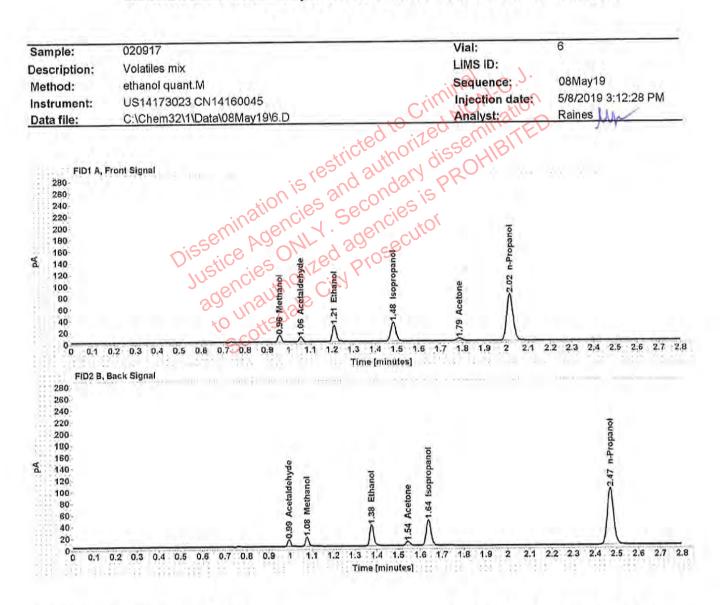


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount	Time	Peak
	(g/100mL)	(min)	Area
n-Propanol	A16976	2.016	159.586

Compound	Time (min)	Peak Area
n-Propanol	2.470	195.914



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
Methanol		0.957	13.345
Acetaldehyde		1.055	9.079
>Ethanol	0.0590	1.211	36.652
Isopropanol	interes.	1.484	53.334
Acetone		1.786	7.446
n-Propanol	-	2.016	162.446

Compound	Time (min)	Peak Area
Acetaldehyde	0.993	11.834
Methanol	1.077	16.953
Ethanol	1.376	45.184
Acetone	1.544	8.976
Isopropanol	1.638	67.217
n-Propanol	2.471	199.913

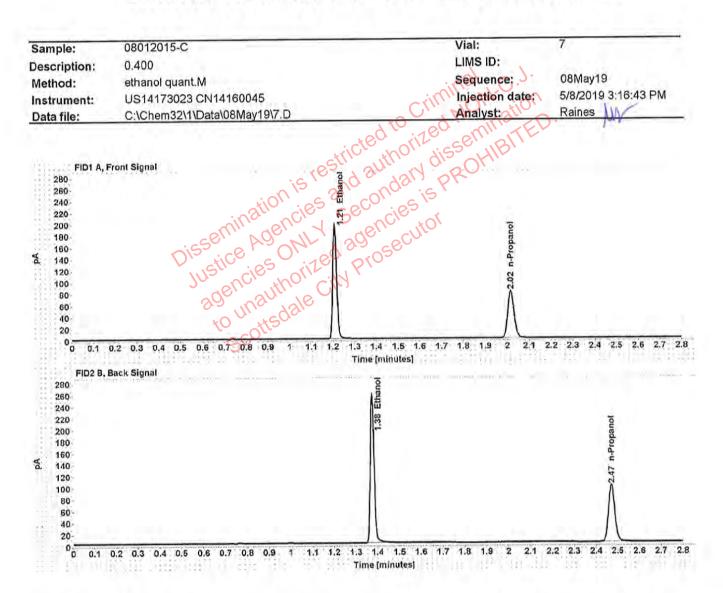
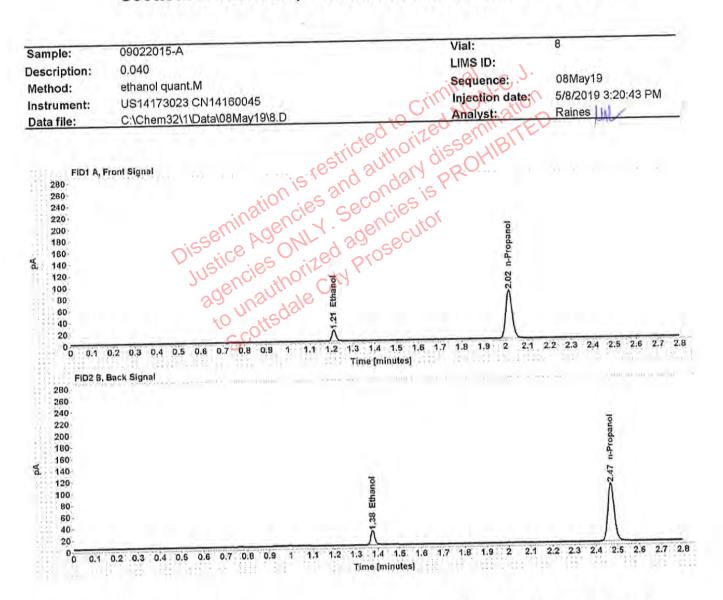


Table 1:	FID 1	A (column	DB-ALC1)
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Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.4041	1.209	253.196
n-Propanol		2.016	163.233

Compound	Time (min)	Peak Area
Ethanol	1.375	316.048
n-Propanol	2.471	201.041



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.0395	1.211	24.890
n-Propanol		2.016	165.497

Compound	Time (min)	Peak Area
Ethanol	1.376	30.655
n-Propanol	2.470	203.624

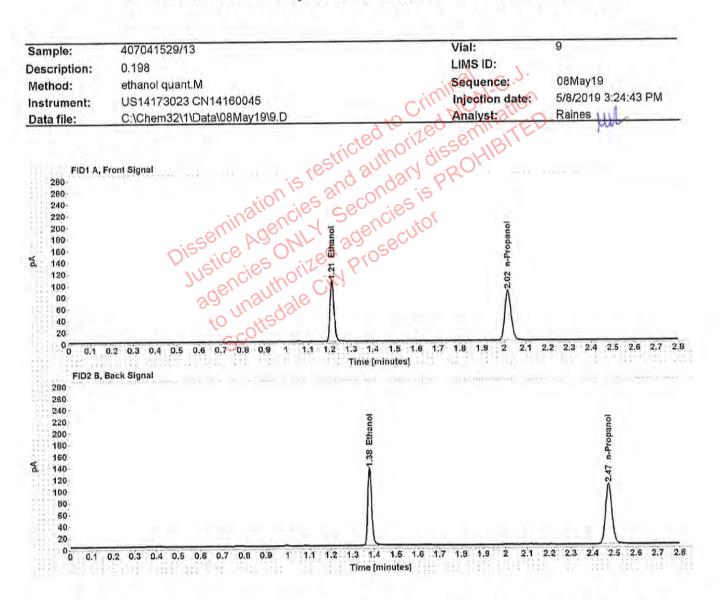
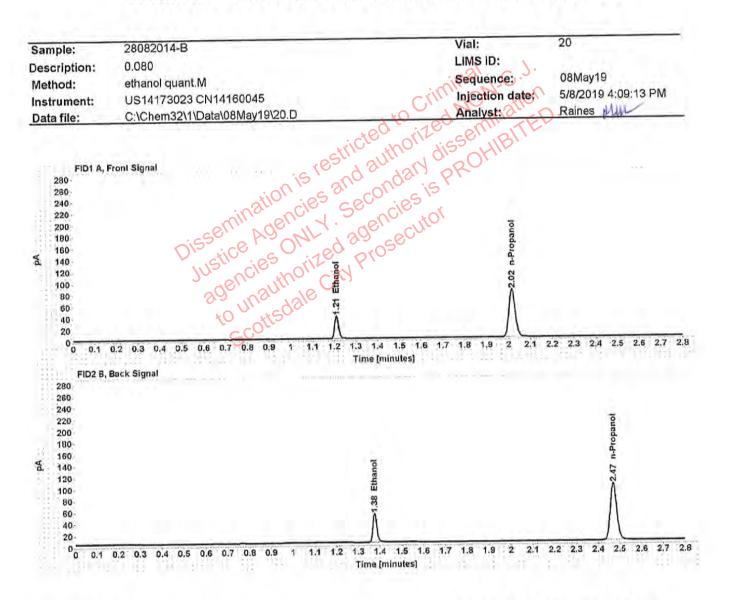


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2046	1.212	135.319
n-Propanol		2.018	172.453

Compound	Time (min)	Peak Area
Ethanol	1.379	168.454
n-Propanol	2.474	212.160



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.0798	1.210	50.333
n-Propanol		2.016	164.900

Compound	Time (min)	Peak Area
Ethanol	1.376	62.049
n-Propanol	2.471	202.152

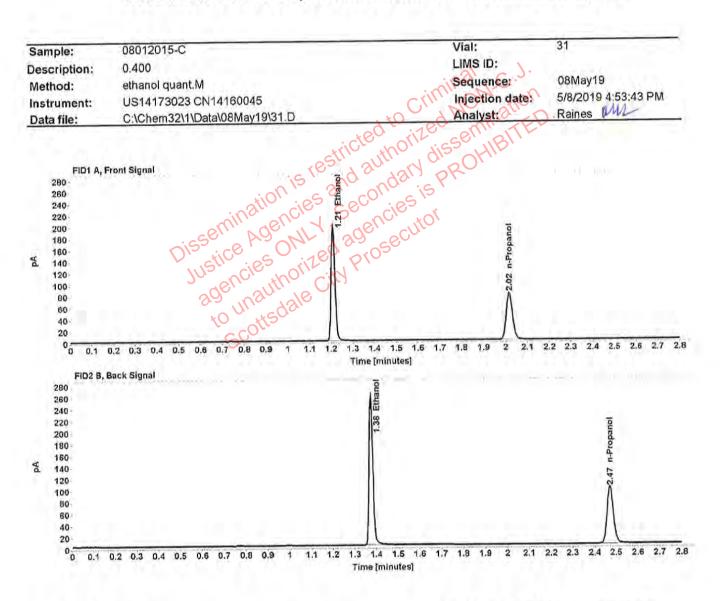
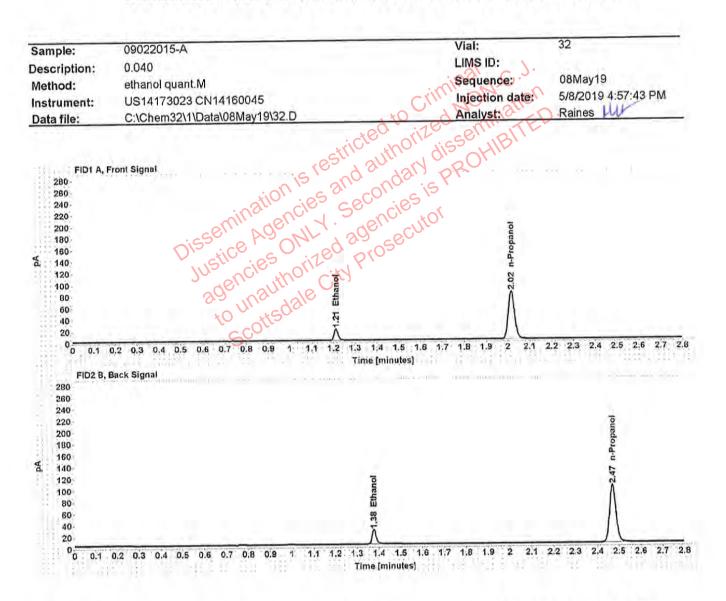


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.4074	1.210	255.159
n-Propanol		2.017	163.154

Compound	Time (min)	Peak Area
Ethanol	1.377	318.480
n-Propanol	2.472	200.850



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.0401	1.211	25.159
n-Propanol		2.016	164.794

Compound	Time (mìn)	Peak Area
Ethanol	1.377	31.063
n-Propanol	2.471	202.498

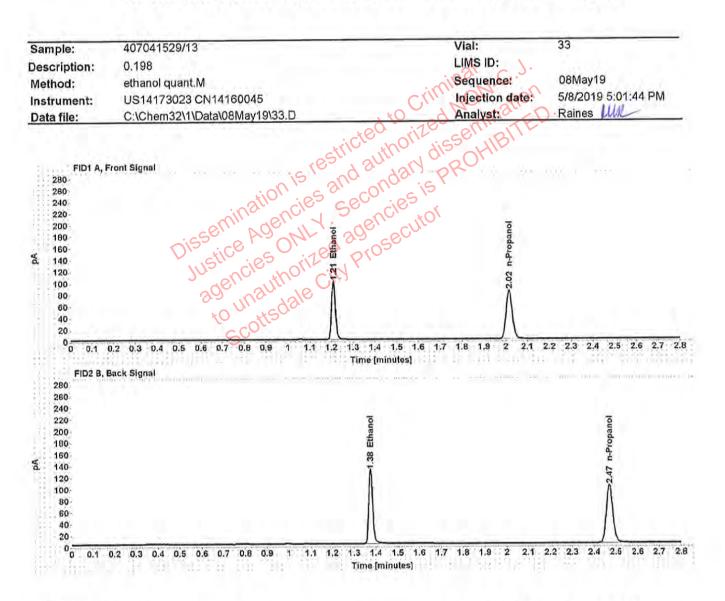


Table 1: FID 1 A (c	olumn DB-ALC1)
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Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2007	1.209	128.604
n-Propanol		2.016	167.074

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	160.287
n-Propanol	2.471	205.549

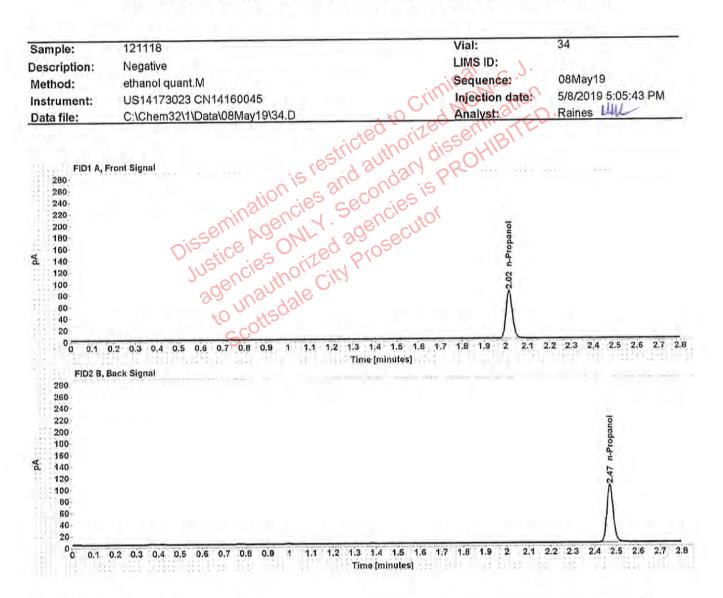


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount	Time	Peak
	(g/100mL)	(min)	Area
n-Propanol		2.016	166.080

Compound	Time (min)	Peak Area	
n-Propanol	2.471	203.994	

# Scottsdale Police Department Crime Laboratory Summary of Cases

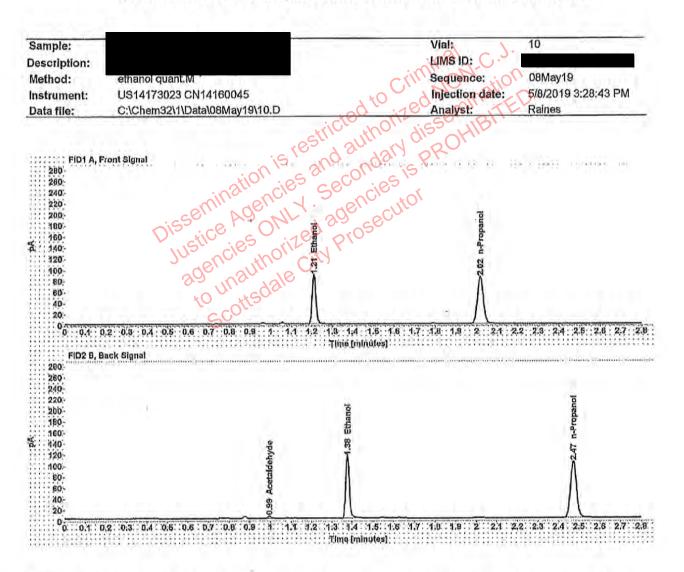
Vials	Test 1 (g/dL)	Test 2 (g/dL)	Mean (g/dL)	Percent Difference*	Absolute Of Difference (g/dL)*
10 11	0,1755	0.1745	0.17500	0.29	0.00050
12 13	0,1094	0.1091	0.10925	0.14	0.00015
14 15	0.0000	0.0000	0.00000	. 90.00	0.00000
16 17	0.1513	0.1496	0.15045	0.56	0.00085
18 19	0.2584	0.2580	0.25820	0.08	0.00020
21 22	0,1542	0.1538	0.15400	0.13	0.00020
23 24	0.0364	0.0353 C	0.03585	1.53	0.00055
25 26	0.2959	0.2971	C 0.29650	<b>d</b> 0.20	0.00060
27 28	0.1189	0.1187	0.11880	0.08	0.00010
29 30	0,2005	0,1989	0.19970	0.40	0.00080

Calculated differences are differences from the mean of the two results.

Raines, Melinda E. - (09-May-2019)

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis



#### Table 1: FID 1 A (column DB-ALC1)

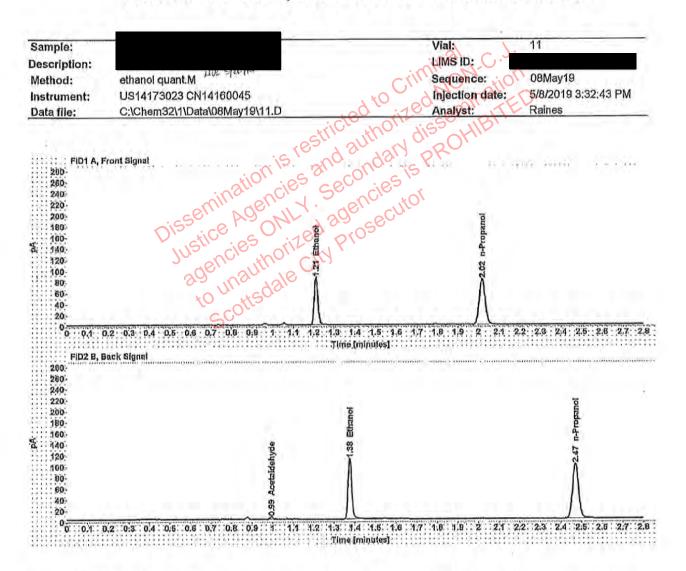
Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1755	1.210	114.227
n-Propanol		2.017	169.690

Compound	Time (min)	Peak Area
Acetaldehyde	0.995	3.878
Ethanol	1.377	141.438
n-Propanol	2.472	208,888

Raines, Melinda E. - (09-May-2019)

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (mìn)	Peak Area
>Ethanol	0.1745	1.210	110.392
n-Propanol		2.016	165.001

#### Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Acetaldehyde	0.994	4.066
Ethanol	1.376	136.502
n-Propanol	2.471	203,255

Case

User: mraines 5/9/2019

Case

### Scottsdale Police Department Crime Lab Volatiles Analysis

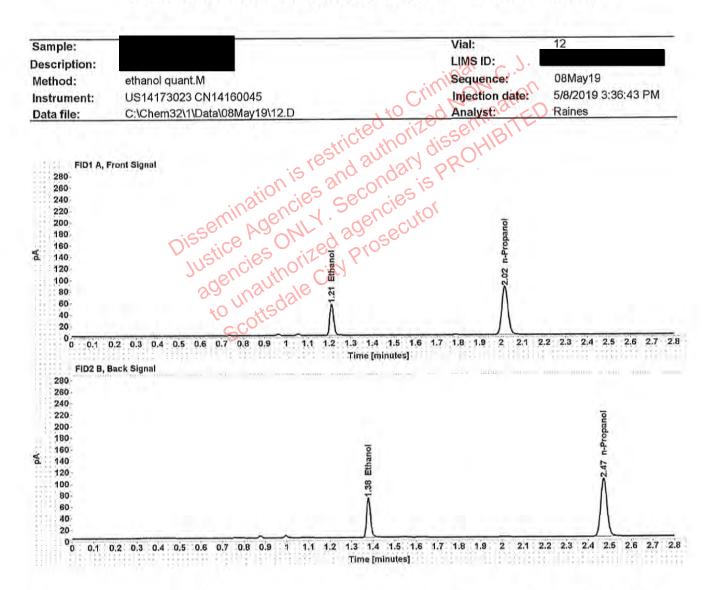


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1094	1.211	70.173
n-Propanol		2.017	167.383

Compound	Time (min)	Peak Area
Ethanol	1.378	86.881
n-Propanol	2.472	205.780

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis

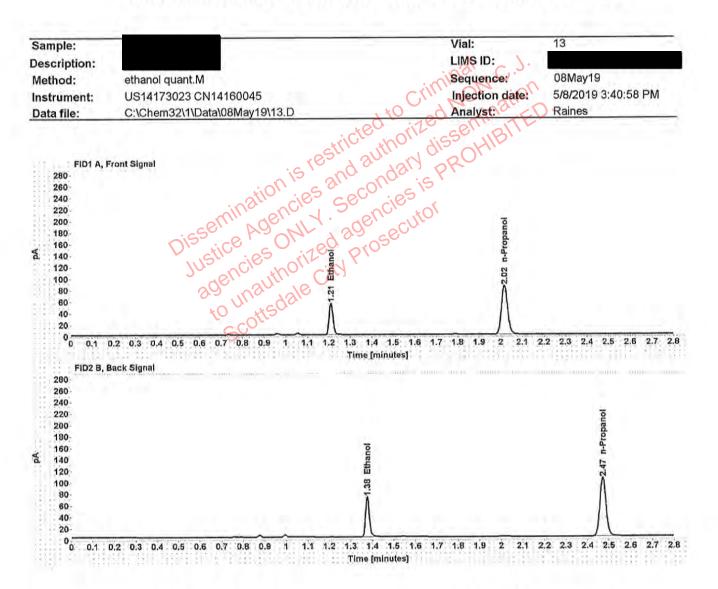


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1091	1.210	70.733
n-Propanol	· · · · · · · · · · · · · · · · · · ·	2.016	169.225

#### Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.376	87.347
n-Propanol	2.471	208.099

Case

Case:

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis

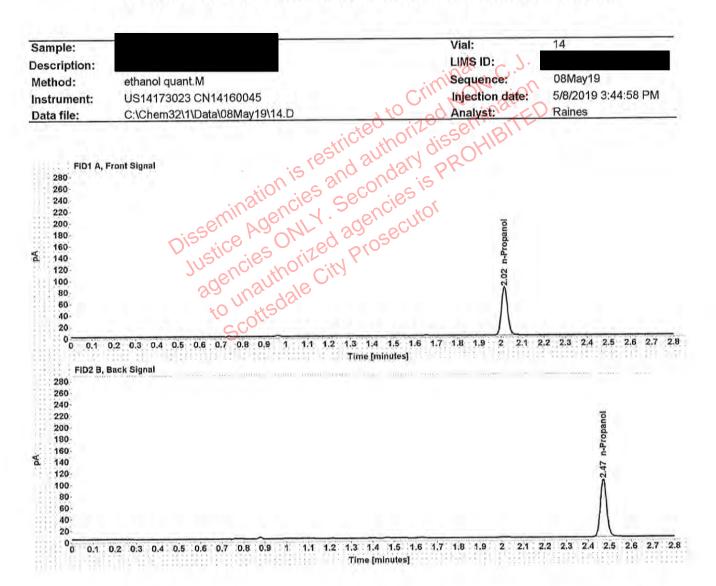


Table 1: FID 1 A (column DB-ALC1)

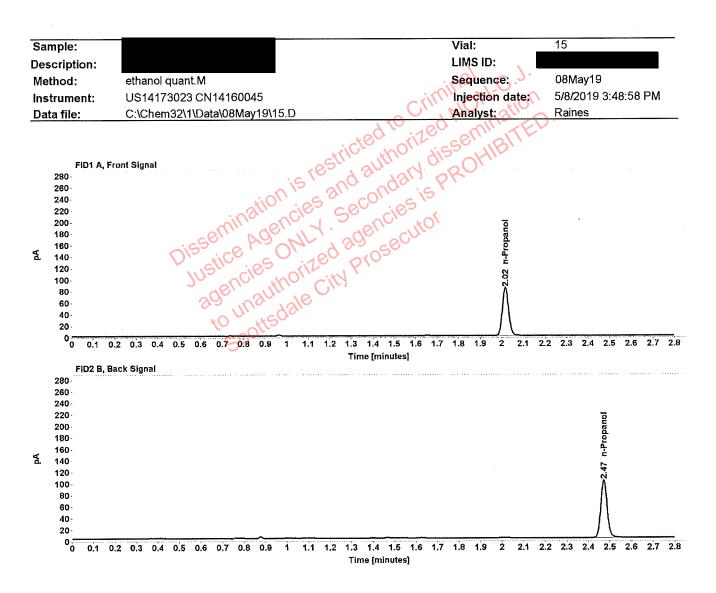
Compound	Amount	Time	Peak
	(g/100mL)	(min)	Area
n-Propanol		2.017	166.236

Compound	Time (min)	Peak Area
n-Propanol	2.472	204.526

User: mraines 5/9/2019

#### Case:





#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount	Time	Peak
	(g/100mL)	(min)	Area
n-Propanol		2.017	166.280

Compound	Time (min)	Peak Area
n-Propanol	2.472	204.591

User: mraines 5/9/2019

Case:

Scottsdale Police Department Crime Lab Volatiles Analysis

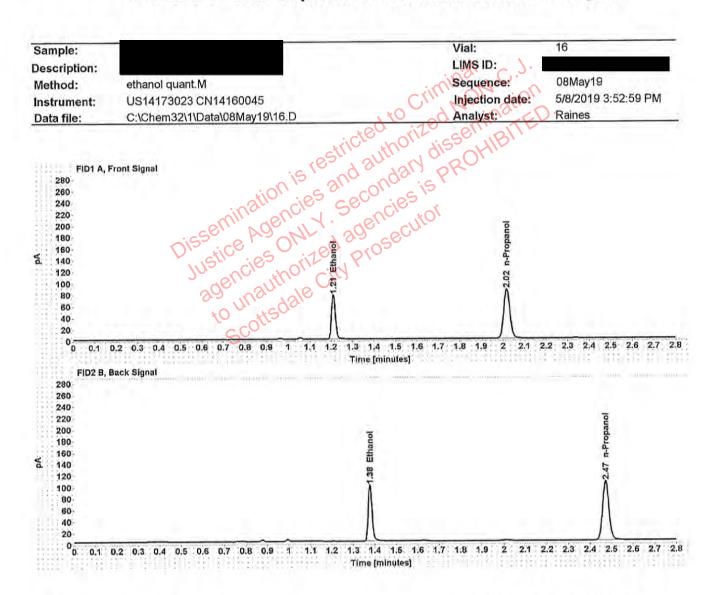


Table 1: FID 1 A (c	column DB-ALC1)
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Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1513	1,211	99.162
n-Propanol		2.017	170.913

Compound	Time (min)	Peak Area
Ethanol	1.377	122.966
n-Propanol	2.472	210.139

Case:

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis

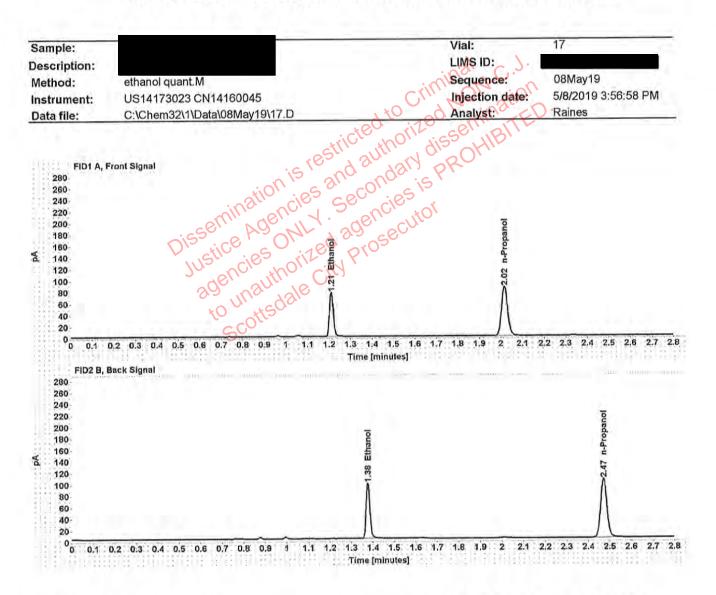


Table 1:	FID 1 A (	(column DB-ALC	1)
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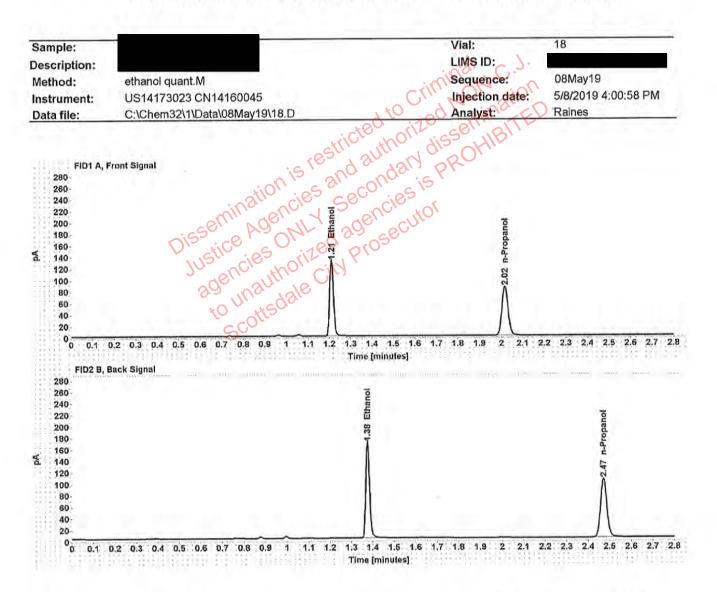
Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1496	1.210	97.546
n-Propanol	LOCH	2.016	170.049

Compound	Time (min)	Peak Area
Ethanol	1.376	121.219
n-Propanol	2.471	209.401

Case:

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2584	1.210	167.999
n-Propanol		2.017	169.426

Compound	Time (min)	Peak Area
Ethanol	1.376	210.574
n-Propanol	2.472	208.412

User: mraines 5/9/2019

## Scottsdale Police Department Crime Lab Volatiles Analysis

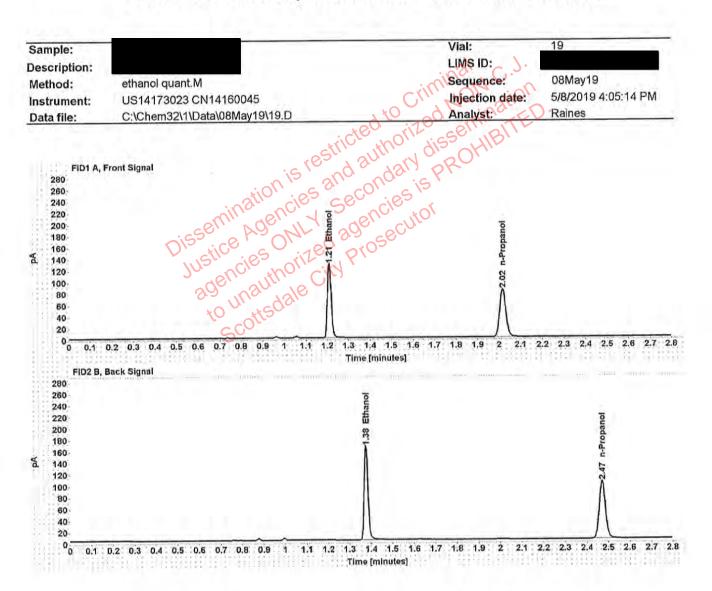


Table 1:	FID 1	A (column	DB-ALC1)
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Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2580	1.209	164.398
n-Propanol	in the second	2.016	166.106

#### Table 2: FID 2 B (column DB-ALC2)

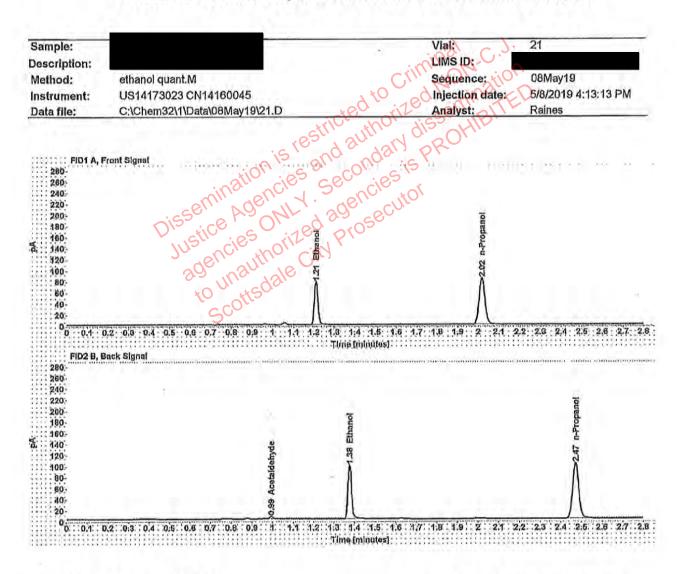
Compound	Time (min)	Peak Area
Ethanol	1.376	205.906
n-Propanol	2.471	204.234

Case

Raines, Melinda E. - (09-May-2019)

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1542	1.210	99,061
n-Propanol		2.016	167.583

#### Table 2: FID 2 B (column DB-ALC2)

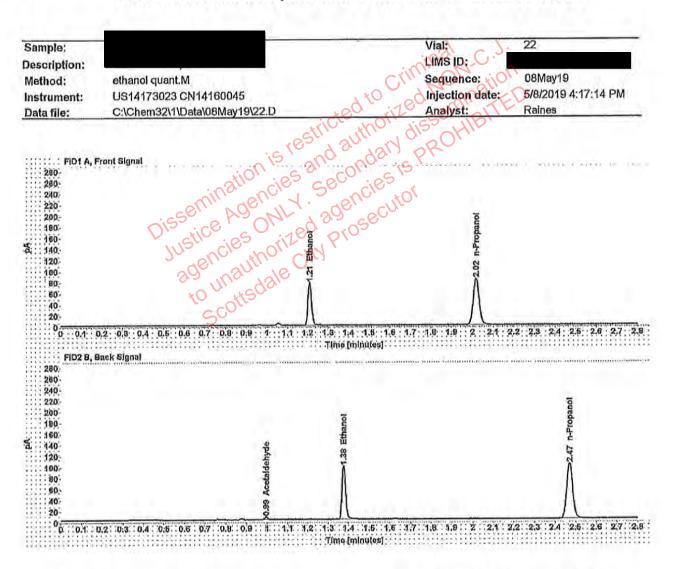
Compound	Time (min)	Peak Area
Acetaldehyde	0,994	4.648
Ethanol	1.376	122,319
n-Propanol	2.471	205.920

Case:

Raines, Melinda E. - (09-May-2019)

User: mraines 5/9/2019

### Scottsdale Police Department Crime Lab Volatiles Analysis



#### Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1538	1.210	98.089
n-Propanol		2.016	166.331

#### Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Acetaldehyde	0.994	4,698
Ethanol	1.376	121,419
n-Propanol	2.471	204.441

Case:

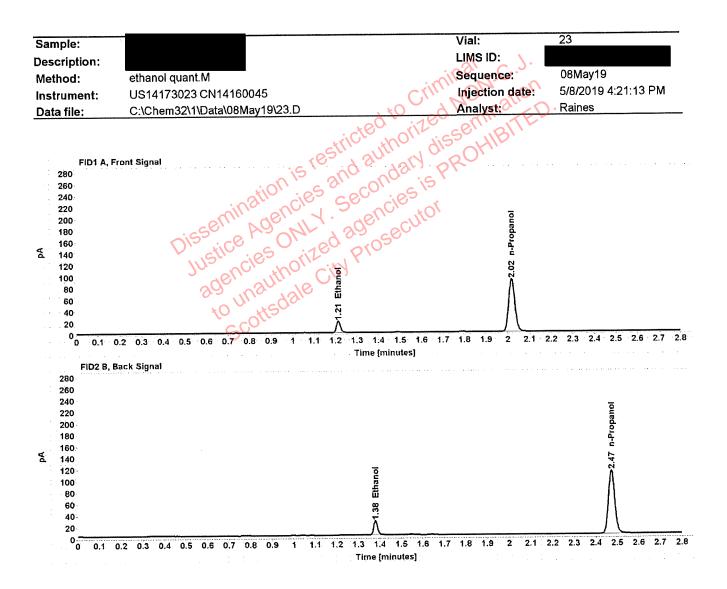


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.0364	1.213	25.325
n-Propanol		2.018	182.775

Compound	Time (min)	Peak Area
Ethanol	1.379	31.103
n-Propanol	2.473	224.657

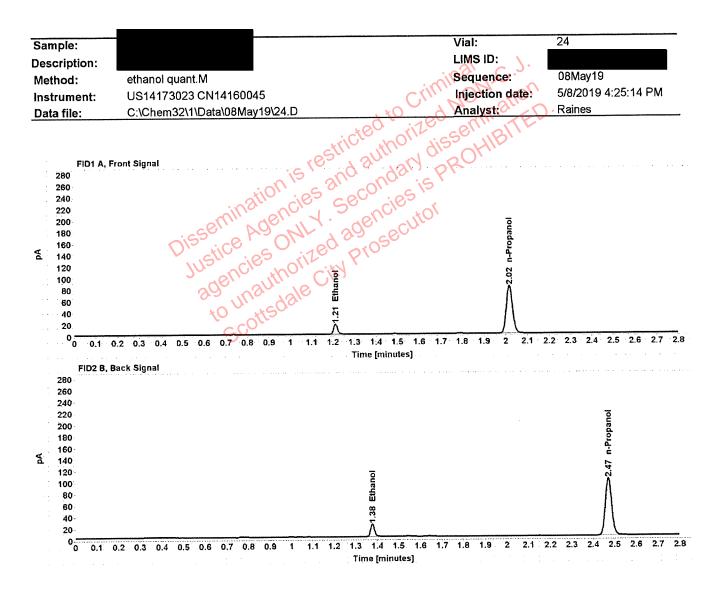


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.0353	1.211	22.224
n-Propanol		2.016	165.340

Compound	Time (min)	Peak Area
Ethanol	1.377	27.416
n-Propanol	2.471	203.189

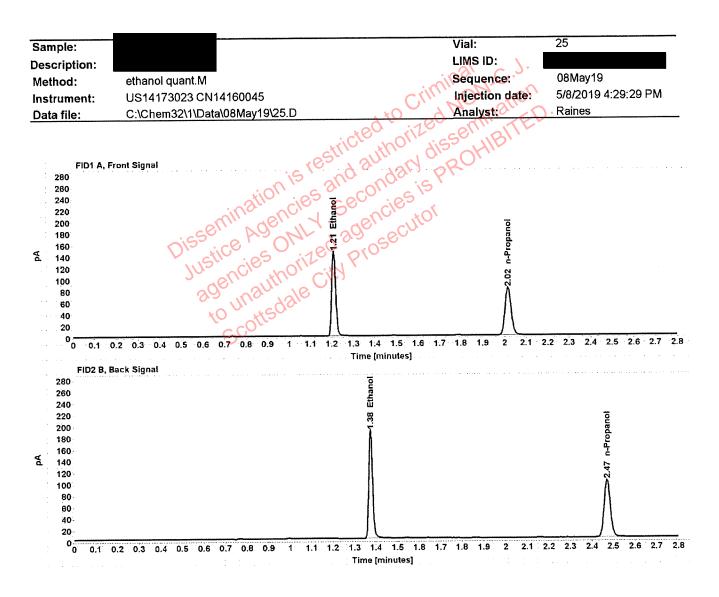


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2959	1.209	187.814
n-Propanol		2.016	165.424

Compound	⊺ime (min)	Peak Area
Ethanol	1.375	234.641
n-Propanol	2.471	203.681

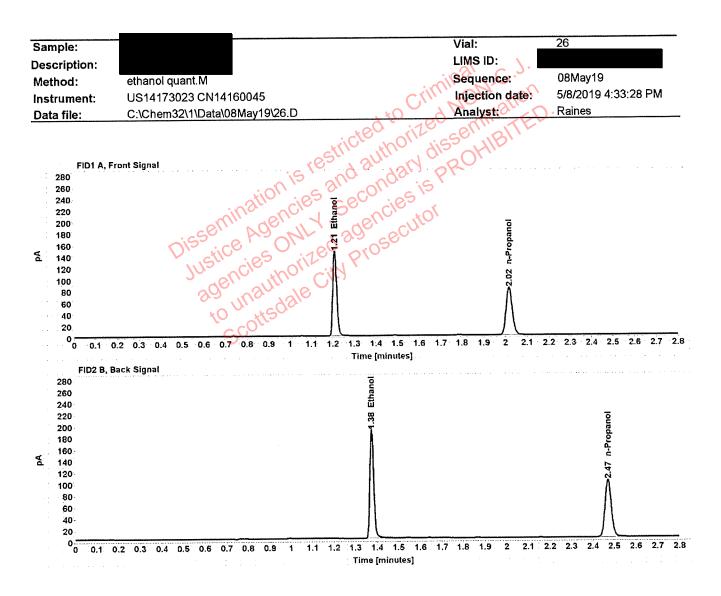


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2971	1.209	187.953
n-Propanol		2.016	164.854

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.375	235.202
n-Propanol	2.471	202.713

9/13

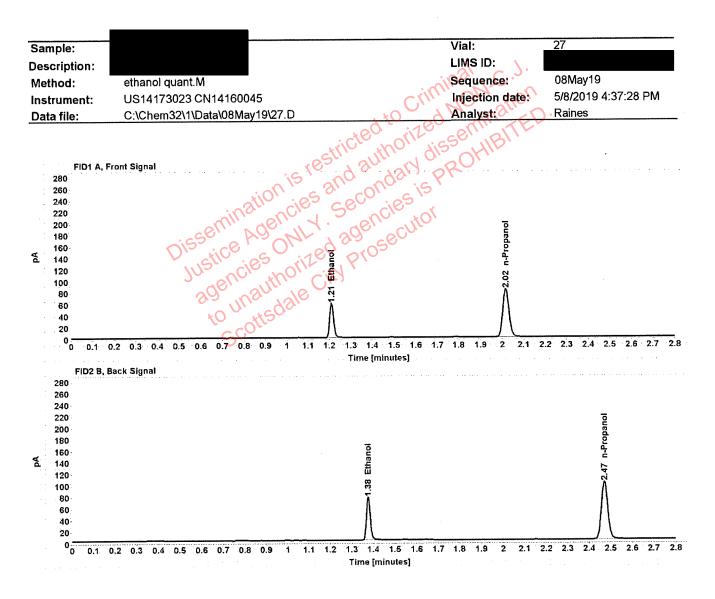


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1189	1.210	75.779
n-Propanol		2.016	166.378

Compound	Time (min)	Peak Area
Ethanol	1.376	93.625
n-Propanol	2.471	204.720

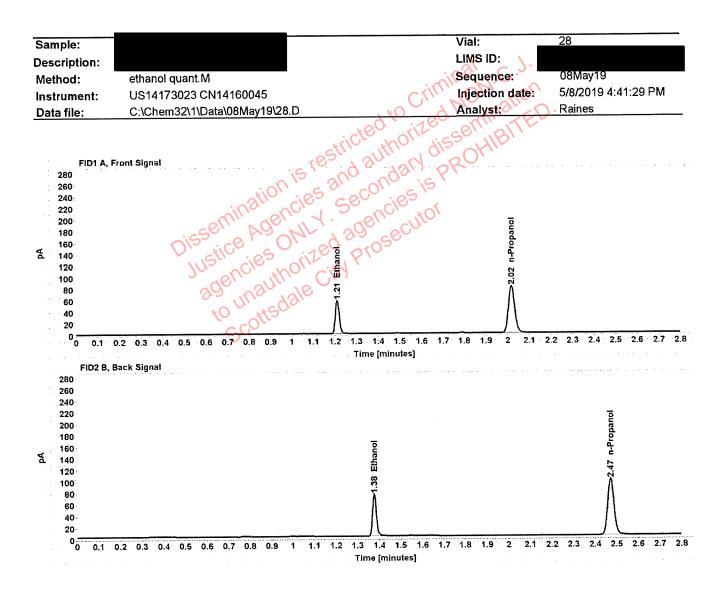


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	⊤ime (min)	Peak Area
>Ethanol	0.1187	1.210	74.064
n-Propanol	*****	2.016	162.868

Table 2: FID 2 B (column DB-ALC2)

Compound	Time (min)	Peak Area
Ethanol	1.376	91.227
n-Propanol	2.471	200.121

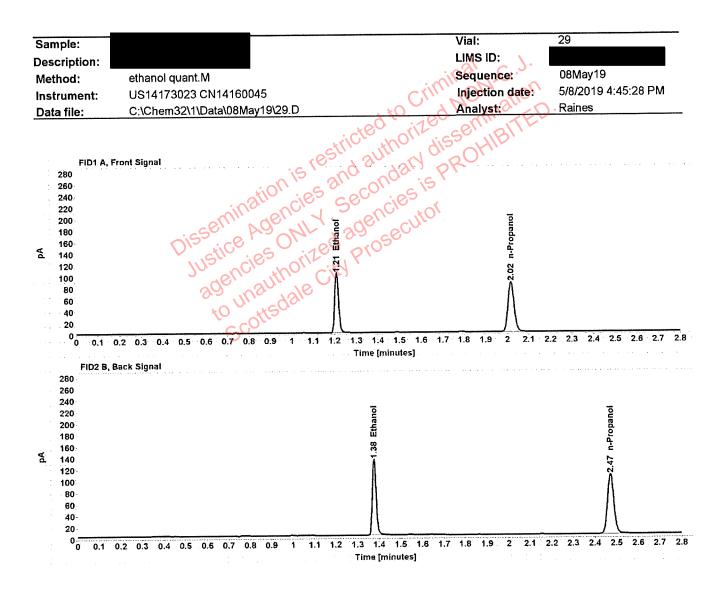


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.2005	1.210	132.523
n-Propanol		2.017	172.286

Compound	Time (min)	Peak Area
Ethanol	1.376	163.904
n-Propanol	2.472	212.108

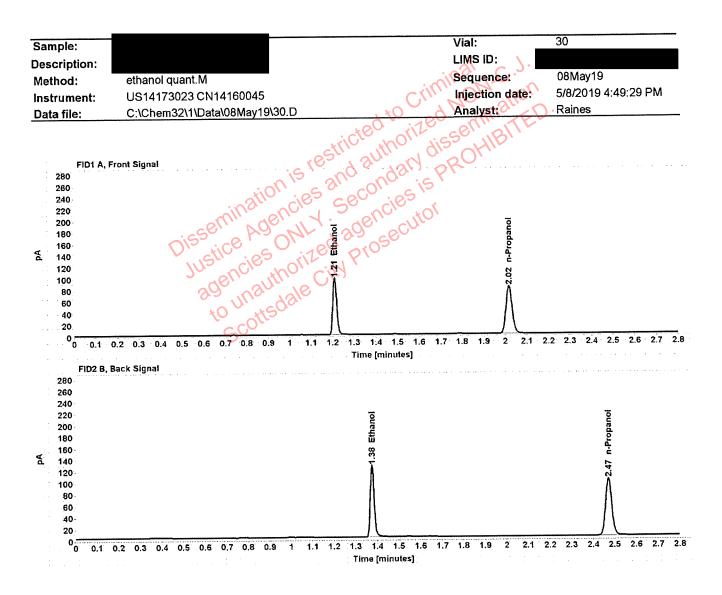


Table 1: FID 1 A (column DB-ALC1)

Compound	Amount (g/100mL)	Time (min)	Peak Area
>Ethanol	0.1989	1.210	125.680
n-Propanol		2.016	164.756

Compound	Time (min)	Peak Area
Ethanol	1.376	157.156
n-Propanol	2.471	202.689